



VISHAY
PRECISION
GROUP



Product Overview

Positioning Systems

Solutions for Electro-Hydraulic Applications

BLH • Nobel Weighing Systems

Brands of VPG Process Weighing



Nobel
Elektronik

www.weighingsolutions.com

History

VPG Process Weighing is a division of Vishay Precision Group, which produces load cells based on resistive foil technology, load-cell-based systems, and vertically integrated products and solutions for multiple markets in the areas of force measurement, industrial weighing, and process control.

VPG Process Weighing includes products from BLH and Nobel Weighing Systems, providers of process weighing and force measurement systems for decades. We use our advanced Micro-Measurements strain gage technology and foil resistor products and know-how in all our transducers and instruments. Our experience and design capabilities make it possible to provide a wide range of standard and custom-made products and solutions.

For decades we have designed, produced, installed, and serviced advanced systems for positioning and control in various industries. Starting with systems for artillery guns, we have extensive experience using electro-hydraulic components as tools for complex positioning applications.

Control Systems for Position, Pressure, Force, Rotational Speed, and Angle Position

Electro-hydraulic control systems from BLH and Nobel Weighing Systems provide extremely accurate control and high repeatability. These make possible consistent product quality and optimal use of raw materials. Our electro-hydraulic control systems:

- Provide high production capacity through rapid machine settings
- Withstand great set forces and have wide operating ranges

Complete System Concept

We work closely with our customers to analyze tasks; propose system solutions; select components; install systems and participate during start-ups; provide follow-up operating assistance, and deliver equipment for serial production.

Our technical and customer service resources enable us to provide high-quality servo assemblies to customers worldwide.

System Solutions

Our CPU-based electronic systems can communicate with host PC/PLC systems via fieldbus. Control parameters and calibration values are set up through terminal programs in a PC-based environment.

Our control system for sawmill machinery can be found in most countries with a lumber industries. Over the years, we have shipped control systems for thousands of axes.

BLH and Nobel Weighing Systems products for controlling web tension, roll pressure, reeling, and disc gaps in pulp and paper operations and cellulose operations are known worldwide.

Our systems are ideal for use with industrial machines with high set speeds and wide operating ranges that require high set forces.

All systems are factory calibrated and ready to be put into operation immediately after installation.

Experience in Electro-Hydraulics

The development of electro-hydraulic systems started in the 1940s. Initially they were used to control artillery guns (Bofors).

Subsequent development involved systems for sawmill applications.

1974	First system for sawmills
1977	Development of H-2 modules for servo control
1983	First single board system (SBS)
1986	Servo actuator (POS) for hydraulic systems
1989	SBS 30
1992	SBS 40
1996	Digital servo controller, microPOS
2004	New generation of servo controller, microPOS4

Sawmill Applications



Our control systems for sawmill machinery can be found in most countries with lumber industries. The systems are found in machines such as:

- Profilers
- Block turners
- Circular saws
- Band saws
- Chipping canters

Industrial Applications



Our control systems are suitable for machine operations that require high set forces with high speed and accuracy. Applications include:

- Hydraulic presses
- Turbines
- Saw mill machines
- Manipulators
- Fatigue testing
- Plastic extruder
- Wind turbines

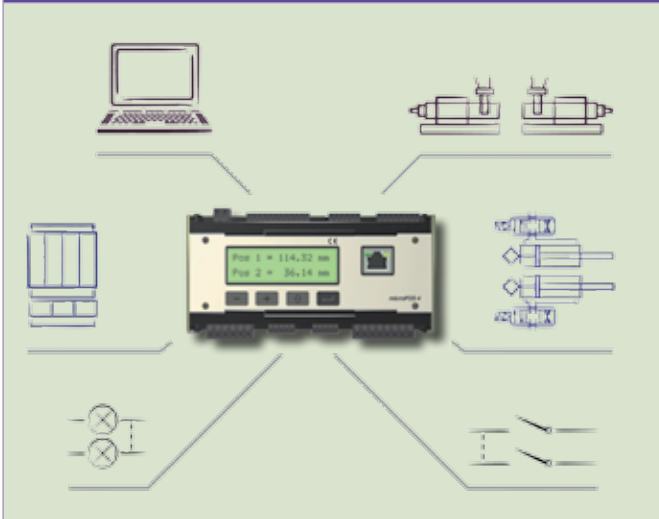
Pulp and Paper Applications



Our control systems are used in critical processes in the pulp and paper industry. Applications include:

- Disc Gap Control (DGC)
- Reel Optimizing System (ROS)
- Rider Roll System (RRS)

SCS – Servo Control System



Modular servo control system for hydraulic applications. The system can control between 2 and 16 servo axes. Communication to the main control unit is done with Modbus or fieldbus.

Typical applications:

- Position control
- Rotational control
- Pressure control
- Force control

SPU – Servo Positioning Unit

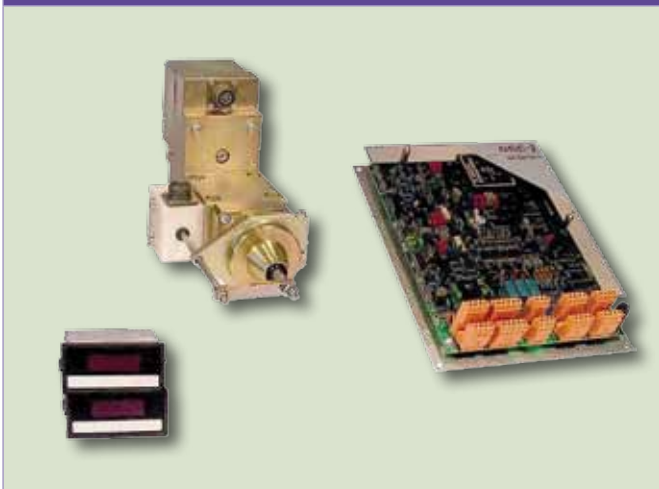


Programmable unit for customer applications including PLC functionality and integrated servo control system.

Typical applications:

- Dimension and sequence functions in sawmill machines

DGC II – Disc Gap Control



For production of mechanical pulp in disc refiners, accurate control of the disc gap is required to achieve a satisfying production quality.

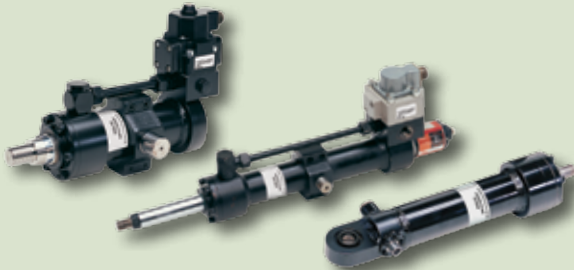
- Control of the disc gap, manually or by computer
- Disc position measuring
- Display of the disc gap and the disc wear
- Setting of limits for the working range
- Fast opening of the disc gap in case of emergency

Control Instruments



- microPOS4 – Digital servo controller
- GATE-3 – Gateway to fieldbus
- LVD-3 – Signal conditioner

Servo Actuators



POS Series Hydraulic Servo Actuators

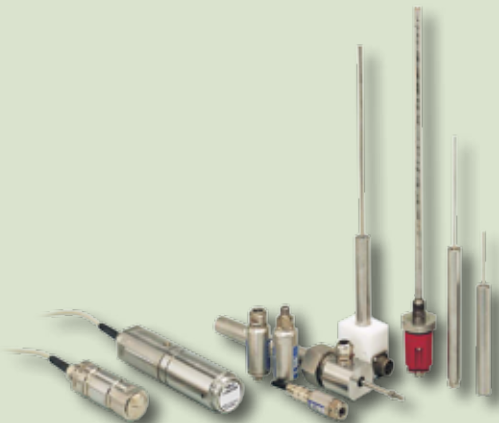
Servo actuators specially designed for rough environments. They can be mounted with front flanges, mid-trunnions, or swivel-eyes. The servo actuator is available with built-in potentiometers or magnetostrictive transducers.

Control Valves



- Servo valves
- DDV valves
- Proportional valves
- Tracer valves

Transducers



- RAG – Position transducer
- LVDT – Position transducer
- MTS – Position transducer
- IDA – Pressure transducer
- KOS/KIS – Force transducer

The Americas

- United States** **Vishay Precision Group – BLH**
3 Edgewater Drive • Norwood, MA 02062
Ph: +1-781-298-2200 • Fax: +1-781-762-3988
E-mail: pw.usa@vishaypg.com
- Canada** **Vishay Precision Group – BLH**
14 Steinway, Unit 10 • Toronto • Ontario M9W 6M6
Ph: +1-800-567-6098 (toll free), +1-416-251-2554 • Fax: +1-416-251-2690
E-mail: pw.can@vishaypg.com

Asia

- Taiwan, R.O.C.** **Vishay Precision Group – Weighing Systems***
8F-1, 171, Section 2, Datong Road • Sijhih City, Taipei 22183
Ph: +886-2-8692-6888 • Fax: +886-2-8692-6818
E-mail: pw.roc@vishaypg.com
*Asia except China
- P.R. China** **Vishay Precision Group – Weighing Systems**
A8220, Shanghai Jia Hua Business Center
No. 808 Hong Qiao Road • Shanghai 200030
Ph: +86-21-6448-6090, Ext. 6098 • Fax: +86-21-6448-6070
E-mail: pw.prc@vishaypg.com
- Israel** **Vishay Precision Group – Weighing Systems**
2 HaOfan Street • Holon 58814
Ph: +972-3-557-0888 • Fax: +972-3-556-8116
E-mail: pw.il@vishaypg.com

Europe

- United Kingdom** **Vishay Precision Group – Nobel Weighing Systems**
Airedale House • Canal Road • Bradford BD2 1AG
Ph: +44-1274-782229 • Fax: +44-1274-782230
E-mail: pw.uk@vishaypg.com
- Germany** **Vishay Precision Group – Nobel Weighing Systems**
Tatschenweg 1 • 74078 Heilbronn
Ph: +49-7131-39099-0 • Fax: +49-7131-39099-229
E-mail: pw.de@vishaypg.com
- France** **Vishay Precision Group – Nobel Weighing Systems**
10 Rue Francis Vovelle • 28000 Chartres
Ph: +33-2-37-33-31-25 • Fax: +33-2-37-33-31-29
E-mail: pw.fr@vishaypg.com
- Sweden** **Vishay Precision Group – Nobel Weighing Systems**
P.O. Box 423 • SE-691 27 Karlskoga
Ph: +46-586-63000 • Fax: +46-586-63099
E-mail: pw.se@vishaypg.com
- Norway** **Vishay Precision Group – Nobel Weighing Systems**
Brobekkveien 80 • 0582 Oslo
Ph: +47-22-88-40-90 • Fax: +47-22-88-40-99
E-mail: pw.no@vishaypg.com